

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A heat exchanger for a seawater desalination plant
which comprises a titanium alloy material, wherein the titanium alloy material comprises
comprising:

a Ti-Al alloy comprising 0.50 - 3.0 mass% of Al, Ti and unavoidable
impurities;

an oxide film on the Ti-Al alloy; and

an Al concentration layer between the Ti-Al alloy and the oxide layer,
wherein:

the oxide film has a thickness of 1.0 - 100 nm;

the oxide film comprises 50 mass% or more of a crystalline oxide, the film being
produced by a process comprising oxidizing the Ti-Al alloy;

the Al concentration layer has an average Al concentration in a range of from ~~0.8-25~~
0.8-6 mass%;

the Al content between the Ti-Al alloy and the oxide layer is ~~25% or less~~0.8-6
mass%; and

the Al concentration of the Al concentration layer is 0.3 mass% or more higher than
an Al concentration of the Ti-Al alloy.

Claim 2 (Currently Amended): The heat exchanger for a seawater desalination plant
which comprises the titanium alloy material according to Claim 1, wherein
the unavoidable impurities comprise Fe, Mo, Ni, Nb and Mn; and
the content of each of Fe, Mo, Ni, Nb and Mn in the Ti-Al alloy is

Fe: ~~0.15%~~ 0.15 mass% or less,

Mo: less than ~~0.10%~~ 0.10 mass%,

Ni: less than ~~0.20%~~ 0.20 mass%,

Nb: less than ~~1.0%~~ 1.0 mass% and

Mn: less than ~~1.0%~~ 1.0 mass%.

Claims 3-6 (Canceled)

Claim 7 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 1, wherein the Al concentration layer has a thickness of 0.10 - 30 μm .

Claim 8 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material of Claim 1 in contact with a steel member.

Claim 9 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 1, wherein the crystalline oxide comprises Brookite.

Claim 10 (Canceled).

Claim 11 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 1, wherein the Al concentration layer has an average Al concentration in a range of from ~~3.45-25~~ 3.45-5.92 mass%.

Claim 12 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 11, wherein the crystalline oxide comprises Brookite.

Claim 13 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 1, wherein the Ti-Al alloy consists of

0.50 - 3.0 mass% of Al, and
a balance of Ti and unavoidable impurities.

Claim 14 (Canceled).

Claim 15 (Withdrawn): A method of making a titanium alloy material, the method comprising
oxidizing a Ti-Al alloy comprising
0.50 - 3.0 mass% of Al, and
a balance of Ti and unavoidable impurities; and
producing the titanium alloy material of Claim 1.

Claim 16 (Currently Amended): The heat exchanger for a seawater desalination plant which comprises the titanium alloy material according to Claim 1, wherein the Ti-Al alloy comprises:

1.0 - 2.5 mass% of Al, and
a balance of Ti and unavoidable impurities.

Application No. 10/522,779
Reply to Office Action of March 17, 2010

Claims 17-18 (Cancelled).